

REMARKS

Applicant appreciates the Examiner's thorough consideration provided the present application. Claims 1, 7, 9, 11, 12, 15, 16, 23-25, 27-29, 36, 37, 40 and 44-49 are now present in the application. Claims 1, 9 and 29 have been amended. Claims 46-49 have been added. Claims 8 and 14 have been cancelled. Claims 1 and 29 are independent. Reconsideration of this application, as amended, is respectfully requested.

Claim Objections

Claims 8, 9 and 14 have been objected to due to the presence of minor informalities. In view of the foregoing amendments, in which the Examiner's helpful suggestions have been followed, it is respectfully submitted that this objection has been addressed. Reconsideration and withdrawal of this objection are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 7-9 11, 12, 14, 27, 29, 36, 37, 40 and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reber, U.S. Patent No. 6,110,748, in view of Gordon, U.S. Patent No. 5,892,577, and further in view of Virtanen, U.S. Patent No. 6,342,349. Claims 15 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reber in view of Gordon and Virtanen, and further in view of Dermers, WO 98/12599. Claims 23-25, 28, and 45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reber in view of Gordon and Virtanen, and further in view of Ekin, Clinical Chemistry, Vol. 37, no 11, pp. 1955-1967. These rejections are respectfully traversed.

In light of the foregoing amendments to the claims, Applicant respectfully submits that these rejections have been obviated and/or rendered moot. As the Examiner will note, independent claim 1 and 29 have been amended.

Claim 1 recites “scanning control means for controlling the scanning means for scanning the specimen along the non-linear curve”, “storage means for storing detector signals relating to the marked objects provided by the detector and corresponding position signals provided by the scanning control means”, “means for retrieving the position signals stored in the storage means”, “a microscope for viewing or recording images of the marked objects, wherein the scanning control means using the retrieved position signals to place the microscope at the position of the marked objects to allow a user to view the images of the marked objects via the microscope”.

Claim 29 recites “storing detector signals relating to the object provided by the detector and corresponding position signals provided by the scanning control means”, “retrieving the position signals stored in the storage means”, “placing a microscope at the position of the object using the retrieved the position signals” and “optically inspecting the object by viewing an image of the object via the microscope by a user”.

Support for the amendments to claims 1 and 29 can be found on the paragraph beginning on page 14, line 22 of the specification. Applicant respectfully submits that the above combinations of elements and steps as set forth in amended independent claim 1 and 29 are not disclosed nor suggested by the references relied on by the Examiner.

In particular, the Examiner referred to Reber’s processor 36 as the scanning control means and referred to Reber’s detector 38 as the detector of the present invention. The processor 36 simply obtains the information provided by the detector 38 to control the positioning

mechanism. However, Reber fails to teach that the processor 36 provides any position signals of the molecular receptors 22 and 24 receiving the corresponding molecule structures. Therefore, Reber fails to teach that the scanning control means provides the position signals as recited in claims 1 and 29.

In addition, Reber also fails to teach storing and retrieving the position signals provided by the scanning control means as recited in claims 1 and 29. In fact, it is unnecessary for Reber to store or retrieve the position of the molecular receptors because the position of the molecular receptors is of no importance in Reber. Reber discloses that the machine-readable data 26 and 28 associates with the molecular receptors 22 and 24 so that the data reader 34 can read the machine-readable data 26 and 28 to identify the molecular receptors 22 and 24 (see col. 3, lines 8-16). Accordingly, the purpose of Reber, i.e., whether the binding event can be correlated to one molecular receptor or the other, is fulfilled by reading the machine-readable data associated with each molecular receptor. Therefore, it is necessary to read the machine-readable data associated with the molecular receptors to identify the molecular receptors. However, it is unnecessary and of no use to store or retrieve the position of the molecular receptors.

The Examiner has correctly acknowledged that Reber fails to teach that the scanning control means is adapted to place the microscope at the position of the marked object as recited in claims 1 and 29. However, the Examiner alleged that it would have been obvious for one skilled in the art to modify Gordon's teaching of "look again" (col. 6, lines 4-10) in view of Reber. Applicant respectfully disagrees.

As mentioned, it is unnecessary and of no use for Reber to store or retrieve the position of the molecular receptors because the position of the molecular receptors is of no importance.

Therefore, one skilled in the art would not have the motivation to modify Gordon's teaching of "look again" in view of Reber.

In addition, Gordon in col. 6, lines 4-10 simply discloses "it may be desirable to scan a selected area of the disc surface... when it is desired to look again at a specific region of interest". In other word, Gordon merely discloses re-scanning a specific region of interest. This is different from placing the microscope at the position of the marked object as recited in claims 1 and 29 because the re-scanning is done by the scanning means, not by the microscope. The Examiner seemed to confuse the scanning means and the microscope of the present invention. The present invention uses the scanning means to provide a rapid scanning of a large area to obtain and store the position of the detected object in a specimen, and then places the microscope at the position of the detected object to allow a user to view the image of the detected object. Unlike the present invention, Gordon's re-scanning cannot place any microscope at the position of the detected object, but simply repeats the scanning to a selected area. Although Gordon's scanning may determine the presence of a particular material in a sample, it cannot be used to obtain the position of the material in the sample or to view the image of the material in the sample at all. Therefore, Gordon also fails to teach "storage means for storing... position signals provided by the scanning control means", "a microscope for viewing images of the marked objects", "the scanning control means using the retrieved position signals to place the microscope at the position of the marked objects to allow a user to view the images of the marked objects via the microscope" as recited in claim 1 and "storing ... position signals provided by the scanning control means", "retrieving the position signals stored in the storage means", "placing a microscope at the position of the object using the retrieved the position

signals” and “optically inspecting the object by viewing an image of the object via the microscope by a user” as recited in claim 29.

With regard to the Examiner’s reliance on Virtanen, although Virtanen discloses that the optical disk reader is a scanning confocal laser microscope and can be used to study the cell counting and cell shape measurement by detecting the signal responsive moieties coating on the surface of the bound cell (see FIGs. 33A-C; col. 48, lines 41-56). In other words, the optical disk reader is used to detect the signal responsive moieties and cannot be used to view the image of the cells covered by the signal responsive moieties. Therefore, Virtanen also fails to teach “a microscope for viewing images of the marked objects” and “place the microscope at the position of the marked objects to allow a user to view the images of the marked objects via the microscope” as recited in claim 1 and “optically inspecting the object by viewing an image of the object via the microscope by a user” as recited in claim 29.

In addition, even if Gordon and Virtanen were combinable, assuming *arguendo*, without the position of the detected object in the specimen, the optical disk reader cannot be placed at the position of the detected object as recited in claims 1 and 29, not to mention the fact that the optical disk reader can only be used to scan the specimen, but not allow a user to view the images of the marked objects via the microscope as recited in claims 1 and 29.

With regard to the Examiner’s reliance on Dermers and Ekin, these references have only been relied on for their teachings related to the dependent claims of the present invention. These references also fail to disclose the above combination of the elements and steps as set forth in amended independent claims 1 and 29. Accordingly, these references fail to cure the deficiencies of Reber, Gordon or Virtanen.

Accordingly, none of those references individually or in combination teach or suggest the limitations of amended independent claims 1 and 29. Therefore, Applicant respectfully submits that claims 1 and 29 and their dependent claims clearly define over the teachings of the references relied on by the Examiner.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

Additional Claims

Additional claims 46-49 have been added for the Examiner's consideration.

Dependent claim 46 recites "identify of the marked objects is establishable by viewing the images of the marked objects". Dependent claim 47 recites "establishing identity of the object by viewing the image of the object". As mentioned, none of the references disclose the features of viewing the image of the object. In particular, Reber merely discloses reading the machine-readable data; Gordon merely teaches determining the presence of the material; and Virtanen merely teaching detecting the signal responsive moieties on the surface of the bound cell. Therefore, none of these references teach establishing identity of the object by viewing the image of the object as recited in claims 46 and 47.

Dependent claim 48 recites "the position signals of the marked objects are angular and radial coordinates". Dependent claim 49 recites "the step of storing the corresponding position signals includes storing angular and radial coordinates of the object provided by the scanning control means". Since none of the utilized references teach storing the position of the object,

they also fail to teach storing angular and radial coordinates of the object provided by the scanning control means as recited in claims 48 and 49.

Favorable consideration and allowance of additional claims 46-49 are respectfully requested.

CONCLUSION

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Joe McKinney Muncy, Registration No. 32,334 at (703) 205-8000 in the Washington, D.C. area to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 09/806,457
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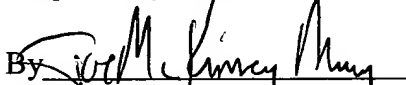
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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